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"She Said WHAT?" "He Did THAT?" Believing False Rumors

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Executive Summary

Why do false rumors spread? Why do otherwise sensible people believe them? Why are they sometimes impervious to correction? There are several answers. (a) Some false rumors gain traction because of their fit with prior convictions within particular groups and cultures. People are strongly motivated to accept certain beliefs, however groundless; they also have good reasons to accept some of those beliefs. Diverse groups will have diverse thresholds for accepting false rumors. It follows that particular rumors can have a tenacious hold on some groups and cultures while dying a rapid death in others; multiple equilibria are likely. (b) Informational cascades are often responsible for belief in false rumors. Such rumors typically spread as a result of such cascades; people believe them because they lack the information that would lead them to reject the signals given by the apparently shared beliefs of numerous others. The important point here is that with respect to many rumors, private signals are essentially nonexistent. (c) Reputational cascades help propagate false rumors. Sometimes people do not correct such rumors, and even endorse them, so as to curry favor or to avoid public opprobrium. Because of the role of early movers, multiple equilibria are (again) likely, as some groups come to believe rumors that other groups deem preposterous. (d) Group polarization accounts for the intensity with which people accept false rumors. Like-minded people, engaged in deliberation with one another, increase one another's confidence in rumors. Here too we see why false rumors are widely believed within some groups but widely rejected in others. As a result of group polarization, such rumors often become entrenched. (e) Biased assimilation can make false rumors exceedingly hard to correct. Because people with strong antecedent commitments process balanced information in a biased way, such information can strengthen people's commitment to false perceptions. That commitment can also be strengthened by corrections, which therefore turn out to be self-defeating.

These points have significant implications for freedom of speech and the marketplace of ideas, especially in the age of the Internet; they demonstrate that the exchange of information may not produce convergence on truth and that damaging false reports will often be widely credited. In some circumstances, a "chilling effect" on false rumors can be desirable; the goal should be to produce optimal chill, rather than no chill at all.

"She Said WHAT?" "He Did THAT?" Believing False Rumors

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"Each rumor has its own public. . . . Occupational and social groups all have their peculiar susceptibilities. . . . A rumor public exists whenever there is a community of interest."[1]

I. The Problem

With the rise of the Internet, false rumors are ubiquitous. Many of them involve famous people.[2] For example, numerous Americans have believed that Barack Obama is a Muslim, that he was not born in the United States, and that he "palls around with terrorists." False rumors are pervasive about the allegedly terrible acts, beliefs, and motivations of public officials and about the allegedly scandalous private lives not only of those officials, but of many other people with a high public profile. In the era of the Internet, it is easy to spread false rumors about almost anyone. A student, a professor, a banker, an employer, an insurance broker, a real estate agent – each of these is vulnerable to an allegation that can have a painful, damaging, or even devastating effect. If the allegation appears on the Internet, those who google the relevant name will immediately learn about it. The allegation will help to define the person. (It might even end up on Wikipedia, at least for a time.) The false rumor can involve organizations – the Central Intelligence Agency, General Motors, Bank of America, the Boy Scouts, the Catholic Church – as well as individuals. And because material on the Internet tends to have considerable longevity, and may even be permanent (for all practical purposes), a false rumor can have an enduring effect.

My goal in this essay is to specify some of the mechanisms that lead to the acceptance of false rumors, even destructive and bizarre ones.[3] Rumor transmission often involves the rational processing of information,[4] in a way that leads people, quite sensibly in light of their existing knowledge, to believe and to spread falsehoods.[5] This problem is especially acute on the Internet.

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[1] Gordon Allport and Leo Postman, The Psychology of Rumor 180 (1948).
[2] For a valuable catalogue, see http://www.snopes.com/
[3] For an overlapping account, exploring some related themes, see Cass R. Sunstein and Adrian Vermeule, Conspiracy Theories, J. Polit Phil (forthcoming 2009).
[4] See Russell Hardin, The Crippled Epistemology of Extremism, in Political Rationality and Extremism 3, 16 (Albert Breton et al. eds.) (Canbridge: Cambridge University Press, 2002).
[5] An illuminating treatment is Terry Ann Knopf, Rumors, Race and Riots (2d ed 2006). My focus is on false rumors, but of course that problem is part of a larger one, including invasion of privacy (with true information) and claims and statements that whether or not true, are not especially important to public discussion (such as

As we shall see, rumors often arise and gain traction because of their relationship with the prior convictions of those who accept them. Some people and groups are predisposed to accept certain false rumors, because those rumors fit so well with what they know; other people are predisposed to reject those rumors, ensuring sharply divergent beliefs after exposure to the same information. Acceptance of false rumors often depends on social fears and hopes of one or another sort, and those fears and hopes vary across social groups; false rumors fuel some fears and alleviate others.[6] Highly divergent beliefs, across such groups, are a predictable result.

As we shall also see, false rumors end up spreading through two processes: social cascades and group polarization. People often rely on what other people believe, or seem to believe, and the informational signals given by others can ensure widespread belief in false rumors. It is natural to respond to these processes by suggesting that people should be exposed to balanced information and to corrections from those who know the truth. But as we shall also see, those very processes may make such exposure unhelpful or even self-defeating; *biased assimilation* ensures that those who have accepted false rumors may not easily give up what they think they know.

I do not explore corrective mechanisms here. But the discussion has a straightforward implication for politics and law: the processes that underlie the "marketplace of ideas" sometimes work poorly, because they ensure that many people will converge on falsehoods rather than truth. It is not at all clear what, if anything, the law should or can do about the matter, but it is reasonable to conclude that a "chilling effect," on the transmission of destructive falsehoods about human beings and their institutions, can be highly desirable. Without such an effect, the marketplace of ideas will predictably lead many people to accept damaging falsehoods about both individuals and institutions, sometimes to the detriment of democracy itself.

II. Propagators and Priors

How do rumors start? Why do some rumors obtain large audiences, while other rumors fall of their own (lack of) weight? My emphasis here is on the social transmission of false beliefs. But we should begin by making some distinctions.

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contemptuous statements about people's physical appearance). Much of the discussion here bears on the larger constellation of problems.

[6] See Prachant Brodia and Nicholas DeFonzo, Problem Solving in Social Interactions on the Internet: Rumor as Social Cognition 67 Social Psych Quarterly 22 (2004). Knopf, supra note, offers many examples.

A. Propagators

Rumors are often initiated by self-conscious propagators, who may or may not believe that the relevant rumors are true.[7] Rumor propagators have diverse motivations. Some of them are *narrowly self-interested*.[8] They seek to promote their own interests by harming a particular person or group. An allegation that a particular person is racist or sexist, or has been engaged in misbehavior or some corrupt project, is a common example. Other propagators are *generally self-interested*. They may seek to sell a product, or to attract eyeballs, by spreading (what turn out to be) falsehoods. Although they may publish falsehoods about people's professional or personal lives, they have no stake in hurting anyone; however, serious, the damage turns out to be collateral. Their initiation of the rumor might be based on no evidence, a little, a moderate amount, or a great deal. What matters is that their own self-interest is conspicuously at stake. On the Internet, people often spread false rumors as a way of attracting eyeballs. Those who spread gossip, of one or another sort, fall in this category.[9]

Other propagators are *altruistic.* They are concerned with some kind of cause. When they say that some public person has engaged in terrible misconduct, they are attempting to promote the public good as they see it. In starting or spreading a false rumor about an individual or an institution, they hope to assist the cause they favor. On the Internet as well as talk radio, altruistic propagators are easy to find; they play an especially large role in the political domain. Both self-interested and altruistic propagators can be unusually casual with the truth, in the sense that they are sometimes willing to say what they know to be false, and sometimes willing to say what they do not know to be true.

Still other propagators are prurient, cruel, or malicious. They seek to uncover and to disclose embarrassing or damaging details, not for self-interest or because of a cause, but for its own sake. They seek affirmatively to harm people, usually out of particular or generalized anger, rage, or cruelty. Here as well, the relationship between their statements and the truth may not be at all close.

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[7] For a more psychological account, see Allport and Postman, supra note, at 36-42.

[8] For a vivid example, see Raymond Momboisse, Rumors (1968) (exploring a situation in which employees deliberately spread urumors about contaminated goods and price gouging to force an employer to capitulate to certain demands).

[9] On self-interest and the circulation of rumors, see Allport and Postman, supra note, at 108.

B. Priors

The success or failure of false rumors depends in significant part on their relationship to the prior convictions of those who hear them.[10] There are two different points here, and they bear on the likelihood that propagators will be able to instill false beliefs.

1. *Motivations and dissonance*. Many people attempt to reduce cognitive dissonance by denying claims that contradict their deepest beliefs.[11] If propagators tell citizens of nation X that their government has engaged in egregious misconduct, they might refuse to believe it. For many people, it is extremely disturbing to hear that one's own government has behaved badly. So too, one's family and friends are unlikely to believe a false and damaging rumor about oneself, because we generally do not like to think ill of our family and friends (unless things have gotten very bad). To reduce cognitive dissonance,[12] people are unlikely to accept false rumors whose acceptance is extremely unpleasant. When allies of a public figure claim not to believe a rumor, they might well be telling the truth; they are strongly motivated to deny it, even to themselves.

By contrast, some people will be strongly inclined to accept damaging rumors.[13] If people of nation X distrust the government of nation Y, they will be motivated to assume the worst about that government; false rumors will find receptive soil.[14] In such circumstances, dissonance reduction will lead people to accept the relevant rumors. If people are inclined to dislike some public figure, or actually enjoy thinking the worst of him, they will be motivated to think that false rumors are true.

In this light, we should have an initial sense of why different groups and even nations will have widely divergent reactions to rumors. Some groups and nations will be strongly motivated to accept them, while others will be motivated equally strongly to accept them. But motivation is only part of the picture.

2. *Beliefs and updating.* If people have strong prior convictions, it is usually because of what they know. If people think that Senator Jones is honorable and that Frank Smith could not possibly have engaged in serious misconduct, it is probably because they have significant

[10] Allport and Portman, supra note, emphasize this point, showing that rumors tend to develop in a way that fits with the interests and presuppositions of this who receive them. They stress the importance of "assimilation," which refers to the force of the receivers' inclinations and prejudices. Id. at 75-115.
[11] See Leon Festinger, A Theory of Cognitive Dissonance (1958).
[12] See id.
[13] On motivated assimilation, see Allport and Postman, supra note, at 105-15.
[14] See Knopf, supra note, at 7 ("stories still persist that the federal government plans to establish concentration camps for blacks").

information about Jones and Smith. To the extent that this is so, it will take a great deal of new information to persuade people to alter their antecedent beliefs. Suppose, for example, that a relevant group has a strong prior conviction that a certain public figure is a decent person who is most unlikely to have engaged in any kind of impropriety. Such people will dismiss a rumor of impropriety on the part of that public figure – unless they have a quite good reason to conclude that the rumor is true.

By contrast, strong prior convictions may make people more rather than less likely to accept false rumors. Suppose that antecedent information suggests that Senator Williams is likely to engage in serious misconduct. If so, a rumor of misconduct will fit with what people already know. Strong priors therefore operate both to prevent and to fuel rumors, including false ones.

3. *Heterogeneous priors*. In any society, there will be heterogeneous prior convictions. Some people will begin with a belief that impropriety is highly likely; others will begin with no predisposition either way; still others will tend to believe that impropriety is likely; others will begin with a mild predisposition the other way. Those with strong initial convictions unfavorable to the propagator might ultimately be willing to believe a false rumor, but only when they are presented with extremely strong reasons to do so. "Tipping points" can be found at which numerous people are eventually lead to accept the rumor[15] -- a point that bears directly on the next topic.

III. Cascades

The discussion of the mechanisms of rumor transmission will cover some separate mechanisms, and it might be useful to begin with two ideas that cut across those mechanisms. *First,* essentially rational processing of information is crucial to all of them. When false rumors spread, it is because those who believe them lack the information that would lead them toward skepticism. As we will see, both cascades and polarization have a great deal to do with the relationship between privately held information and the informational signals sent by others; biased assimilation is also affected by what people already know. *Second*, it is necessary to attend to people's motivations; we cannot understand belief in false rumors without seeing why, how, and when people are motivated to accept them. Our reactions to information are affected by

[15] See Timur Kuran, Private Truths, Public Lies (1998); Marc Granovetter, Threshold Models of Collective Behavior, 83 Am Journal Sociology 1420 (1978).

our desires. If we want to credit a rumor, we may well do so even if we would reject it if we found it depressing or disturbing. In addition, people care about their reputations, and for that reason they might silence themselves and appear to accept rumors even if they do not actually believe them. These various points cut across a wide range of processes.

A. Informational Cascades

To see how informational cascades work, imagine a deliberating group that is deciding whether some person or group has engaged in unfair or even outrageous conduct, warranting disapproval or some kind of punishment or reprisal.[16] Assume that the group members are announcing their views in sequence. From his own knowledge and experience, each member has at least a little private information about what that person or group has done. But each member also attends, reasonably enough, to the judgments of others. Andrews is the first to speak; perhaps he is a propagator. Starting or spreading a rumor, he suggests that bad conduct has indeed occurred. Barnes now knows Andrews's judgment; it is clear that she too should certainly conclude that there was such conduct if she agrees independently with Andrews. But if her independent judgment is otherwise, she would—if she trusts Andrews no more and no less than she trusts herself—be indifferent about what to think or do, and she might simply flip a coin.

Now turn to a third person, Carlton. Suppose that both Andrews and Barnes have said that outrageous conduct has occurred, but that Carlton's own information, though not conclusive, suggests that they are wrong. In that event, Carlton might well ignore what he knows and follow Andrews and Barnes. It is likely, after all, that both Andrews and Barnes had reasons for their conclusion, and unless Carlton thinks that his own information is better than theirs, he should follow their lead. If he does, Carlton is in a cascade.

Now suppose that Carlton is speaking in response to what Andrews and Barnes did, not on the basis of his own information, and also that subsequent deliberators know what Andrews, Barnes, and Carlton said. On reasonable assumptions, they will do exactly what Carlton did: accept the view that bad or outrageous conduct has occurred regardless of their private

[16] I draw here on David Hirshleifer, The Blind Leading the Blind: Social Influence, Fads, and Informational Cascades, in The New Economics of Human Behavior 188, 193–95 (Mariano Tommasi & Kathryn Ierulli eds., Cambridge: Cambridge University Press, 1995), and on the discussion in Cass R. Sunstein, Why Societies Need Dissent 55–73 (Cambridge: Harvard University Press, 2003).

information (which, we are supposing, is relevant but inconclusive). This will happen even if Andrews initially blundered. That initial blunder, in short, can start a process by which a number of people participate in creating serious mistakes. This sort of process happens on the Internet every day.

If this is what is happening, there are two major social problems. First, people will believe a falsehood, possibly a damaging one. They might well disapprove of a third party, or favor punishment or some kind of sanction against that person, even if the rumor is baseless. Second, those who are in the cascade do not disclose any information or doubts that they privately hold. In the example just given, the judgment of group members will not reflect the overall knowledge, or the aggregate knowledge, of those within the group—even if the information held by individual members, if actually revealed and aggregated, would produce a better and quite different conclusion. The reason for the problem is that individuals are following the lead of those who came before.

With respect to rumors, of course, people start with diverse levels of information. Most or many will lack any relevant information at all; they might simply follow the informational signals of their predecessors, including the propagators. Other people will have some relevant information, but not enough to overcome the signal given by the shared beliefs of many others, at least of those others are trusted. Still other people will have some relevant information, but are nonetheless motivated to accept or to reject the false rumor. When rumors spread, it is often through a process in which they are accepted by people with low thresholds for acceptance, and eventually through others as well, simply because most people think that so many people cannot be wrong.[17] A tipping point can be reached in which large numbers of people accept a false rumor even though it is quite baseless.

Informational cascades often do occur in the real world. For a seemingly distant example, offering illumination on the mechanisms of rumor transmission, consider a study of music downloads. Matthew Salganik and his coauthors[18] created an artificial music market, with 14,341 participants who were visitors to a web site popular with young people. The participants were given a list of previously unknown songs from unknown bands. They were asked to listen to a

[17] For many illustrations, see Knopf supra note.
[18] See Matthew J. Salganik et al., "Experimental Study of Inequality and Unpredictability in an Artificial Cultural Market," Science 311 (2006):

brief selection of any songs that interested them, to decide which songs (if any) to download, and to assign a rating to the songs they chose. About half of the participants were asked to make their decisions independently, based on the names of the bands and the songs and their own judgment about the quality of the music. The other half could see how many times each song had been downloaded by other participants. These participants were also randomly assigned to one or another of eight possible "worlds," with each evolving on its own; those in any particular world could see only the downloads in their own world. A key question was whether people would be affected by the choices of others – and whether different music would become popular in the different "worlds."

Informational cascades developed. In all eight worlds, individuals were far more likely to download songs that had been previously downloaded in significant numbers, and far less likely to download songs that had not been so popular. Most strikingly, the success of songs was quite unpredictable, and the songs that did well or poorly in the control group, where people did not see other people's judgments, could perform very differently in the "social influence worlds." In those worlds, most songs could become very popular or very unpopular, with much depending on the choices of the first downloaders. The identical song could be a hit or a failure, simply because other people, at the start, were seen to choose to download it or not. As Salganik and his coauthors put it: "In general, the 'best' songs never do very badly, and the 'worst' songs never do extremely well," but (and this is the remarkable point) "almost any other result is possible."[19]

We can easily see an analogue to the domain of rumor transmission. Alleged facts do spread from one "world" to another -- and in different worlds, people will believe different "facts." Propagators will have terrific success in some worlds but none at all in others. Quality, in terms of correspondence to the truth, might not matter a great deal. We can see in this light why some social groups will hold, quite tenaciously, to false rumors, while other groups will treat them as implausible or even ridiculous. The differential success of rumors provides a real-world analogue to the science fictional concept of "parallel worlds." Consider in this regard the existence of widely divergent group judgments about the origins and causes of AIDS -- with some groups believing, falsely, that the first cases were observed in Africa as a result of sexual relations between human beings and monkeys, and with other groups believing, also falsely, that

[19] Id.

the virus was produced in government laboratories.[20] Consider also the existence of widely divergent views, including rumors, about the causes of the 9/11 attacks – views that attribute the attacks to many sources, including Israel and the United States.[21]

The multiple views about AIDS and the attacks of 9/11 are products of social interactions and in particular of cascade effects. False rumors often spread as a result. When groups come to believe some alleged fact about the egregious misconduct of (say) the United States, or the foolishness or terrible misdeeds of a public or private figure, an informational cascade is often at work. Indeed, cascade-like processes are sufficient to explain divergences across groups – but as we shall see, divergent prior beliefs are important as well.

B. Reputational Cascades

In a reputational cascade, people think that they know what is right, or what is likely to be right, but they nonetheless go along with the group or the crowd in order to maintain the good opinion of others. Suppose that Albert suggests that a certain political figure is corrupt and that Barbara concurs with Albert, not because she actually thinks that Albert is right, but because she does not wish to seem, to Albert, to be ignorant or indifferent to official corruption. (Albert may or may not be a propagator.) If Albert and Barbara say that the official is corrupt. Cynthia might not contradict them publicly and might even appear to share their judgment -- not because she believes that judgment to be correct, but because she does not want to face their hostility or lose their good opinion.

It should be easy to see how this process might generate a cascade. Once Albert, Barbara, and Cynthia offer a united front on the issue, their friend David might be reluctant to contradict them even if he thinks that they are wrong. The apparently shared view of Albert, Barbara, and Cynthia carry information; that view might be right. But even if David is skeptical or has reason to believe that they are wrong, he might not want to take them on publicly. The problem, of course, is that the group will not hear what David knows. Reputational cascades often help to account for the spread of a false or disgusting rumor. Especially when people live in some kind of enclave, they may silence themselves in the face of an emerging judgment or opinion even if

20 See Fabio Lorenzi-Cioldi & Alain Clémence, Group Processes and the Construction of Social Representations, in Blackwell Handbook of Group Psychology: Group Processes 311, 315-17 (Michael A. Hogg & R. Scott Tindale eds., Oxford: Blackwell Publishing, 2001),.

21 See Sunstein and Vermeule, supra note.

they believe it to be wrong. Often people will be suspicious of a rumor, or believe that it is not true, but they will not contradict the judgment of the relevant group, largely in order to avoid social sanctions.

In the actual world of group decisions, people are of course uncertain whether publicly expressed statements are a product of independent knowledge, participation in an informational cascade, or reputational pressure. Much of the time, listeners and observers often overstate the extent to which the actions of others are based on independent information rather than social pressures. False rumors spread and are sometimes quite robust as a result. And here too, of course, diverse thresholds matter a great deal.[22] Jones may not silence himself, or agree with the relevant group, unless the reputational pressure is intense; Smith might more easily be lead to go along with the crowd. But if most of the world consists of people like Smith, then Jones might eventually yield.

IV. Group Polarization

As we shall now see, deliberation among like-minded people often entrenches false rumors.[23] The explanations here overlap with those that account for social cascades, and here too we can understand why some groups will believe rumors that seem ludicrously implausible in others.

A. The Basic Finding

What happens when group members deliberate with one another? A standard answer is *group polarization*: Like-minded people typically end up in a more extreme position in line with their predeliberation tendencies.[24] If, for example, people tend to believe that the nation's leader is a criminal, or that some corporate executive is a scoundrel, their belief to this effect will be strengthened after they speak together. In the context of rumor transmission, the implication is simple: If group members begin with an antecedent commitment to a rumor, internal deliberations will strengthen that belief. The antecedent commitment might involve a specific

[22] See the emphasis on the "striking individual differences in susceptibility to rumor," in Allport and Postman, supra note, at 180.
[23] See Allport and Postman, supra note, at 35.
[24] See Roger Brown, Social Psychology: The Second Edition (1986).

claim, including a bit of gossip. Or it might involve a more general belief with which the rumor easily fits. The key point is that internal deliberations should entrench the rumor.

With respect to group polarization, the initial experiments involved risk-taking behavior. What happens when risk-inclined people talk with other people who are risk-inclined? The answer is that they become still more risk-inclined.[25] Consider, for example, the questions whether to take a new job, to invest in a foreign country, to escape from a prisoner-of-war camp, or to run for political office.[26] For many decisions, members of deliberating groups became significantly more disposed to take risks after a brief period of collective discussion. On the basis of such evidence, it became standards to believe that deliberation produced a systematic "risky shift." For a significant period, the major consequence of group discussion, it was thought, was to produce that risky shift – a thought that would bear on many parts of social life, because groups are often asked to decided whether to take a gamble or instead to take precautions.

But later studies drew this conclusion into serious question. On many of the same questions on which Americans displayed a risky shift, Taiwanese subjects showed a "cautious shift."[27] On most of the topics just listed, deliberation led citizens of Taiwan to become significantly less risk-inclined than they were before they started to talk. Nor was the cautious shift limited to the Taiwanese. Among Americans, deliberation sometimes produced a cautious shift as well, as risk-averse people became more reluctant to take certain risks after they talked with one another.[28]

At first glance, it seemed hard to reconcile these competing findings, but the reconciliation turned out to be simple: *The pre-deliberation median is the best predictor of the direction of the shift.*[29] When group members are disposed toward risk-taking, a risky shift is observed. Where members are disposed toward caution, a cautious shift is observed. It follows that the striking difference between American and Taiwanese subjects is not a product of any cultural difference in how people behave in groups. It results from a difference in the

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[25] See STONER, J. A. F., A COMPARISON OF INDIVIDUAL AND GROUP DECISION INVOLVING RISK (1961) (unpublished Master's thesis, Massachusetts Institute of Technology).
[26] See Lawrence Hong, Risky Shift and Cautious Shift: Some Direct Evidence on the Culture Value Theory, 41 Social Psych 342 (1978).
[27] See id.
[28] Serge Moscovici & Marisa Zavalloni, The Group as a Polarizer of Attitudes, J. Personality & Soc. Psychol. 12, 125-135 (1969).
[29] Id.; Roger Brown, Social Psychology: The Second Edition 210-12 (1985).

predeliberation medians of the Americans and the Taiwanese on the key questions.[30] Thus the risky shift and the cautious shift are both subsumed under the general rubric of group polarization.

In the behavioral laboratory, group polarization has been shown in a remarkably wide range of contexts, many bearing directly on transmission of rumors.[31] How good-looking are people in slides? Group deliberation produces more extreme judgments about that question: If individuals think that someone is good-looking, the group is likely to think that that person is devastatingly attractive.[32] (Movie stars undoubtedly benefit from this process.) Group polarization also occurs for obscure factual questions, such as how far Sodom (on the Dead Sea) is below sea level.[33] Even burglars show a shift in the cautious direction, when they discuss prospective criminal endeavors.[34]

In the domains of rumor transmission, several studies are especially relevant. After deliberation, groups of people turn out to be far more inclined to protest apparently unfair behavior than was their median member before discussion began.[35] Consider, for example, the appropriate response to three different events: police brutality against African-Americans; an apparently unjustified war; and sex discrimination by a local city council. *In every one of these contexts, deliberation made group members far more likely to support aggressive protest action.* Group member moved, for example, from support for a peaceful march to support for a non-violent demonstration, such as a sit-in at a police station or city hall. Interestingly, the size of the shift toward a more extreme response was correlated with the initial mean. When people initially supported a strong response, group discussion produced a greater shift in the direction of a support for a still stronger response. This finding is standard within the literature: the extent of the shift is associated with the strength of the average person's starting point.[36]

People often make individual judgments about fairness and unfairness, including about whether particular people have behaved unfairly; they also make those judgments in groups.

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[30] See Hung, supra note.
[31] John C. Turner et al, Rediscovering the Social Group: A Self-Categorization Theory 142-170 (1987)
[32] Id at 153.
[33] Id.
[34] Paul Cromwell et al., Group Effects on Decision-Making by Burglars, 69 Psychol. Rep. 579, 586 (1991).
[35] See Norris Johnson et al., Crowd Behavior as "Risky Shift": A Laboratory Experiment, 40 Sociometry 183 (1977).
[36] Id. at 186.

What happens to our judgments about unfairness when we speak with one another? The answer should now be clear: When we are individually inclined to believe that unfairness has occurred, our discussion will intensify our beliefs and make us very angry.[37] The most relevant studies had a high degree of realism. People were asked to engage in certain tasks, designed to simulate activities that might actually be undertaken in a business setting -- such as classifying budget items, scheduling meetings, and routing a phone message through the proper channels with assignment of the proper level of priority. Good performance could produce financial rewards. After completing the tasks, people were able to ask for their supervisors' judgments and to receive feedback from them. Some of the answers seemed rude and unfair, such as, "I've decided not to read your message. The instructions say it's up to me . . . so don't bother sending me any other messages or explanations about your performance on this task," and "If you would have worked harder, then you'd have scored higher. I will not accept your message on this round!"

People were asked to rate their supervisors along various dimensions, including fairness, politeness, bias, and good leadership. The ratings occurred in three periods. The first included individual ratings; the second included a group consensus judgment; and the third included individual ratings after group judgment. It turned out that group judgments were far more negative than the average of individual judgments.[38] In many cases, group members decided that the behavior was really very unfair, even though individuals believed that the behavior was only mildly unfair. Interestingly, the groups' conclusions were typically more extreme than were people's individual judgments after deliberation. But such judgments were nonetheless more negative, and thus more extreme, than predeliberation individual judgments.

This study does not exactly involve rumor transmission, but it bears directly on that subject. Often people think that some person or institution has engaged in unfair or outrageous behavior, and when they speak to one another, that belief intensifies. False and terrible rumors become entrenched as a result.[39] If people begin with a belief that person X might well have said or done Y, they will become more committed to that (false) belief as they speak with one another. And even if people begin without a clear belief about Y, it may well suffice if they start

[37] See E. Allan Lind et al., The Social Construction of Injustice: Fairness Judgments in Response to Own and Others' Unfair Treatment by Authorities, 75 Organizational Behavior and Human Decision Processes 1 (1998).
[38] Id. at 16.
[39] Knopf, supra note, offers examples in the domain of racial conflict

with some negative judgments about X. Once it is suggested that X said or did Y, the group's antipathy to X may well be enough to ensure that group polarization entrenches the false rumor.

B. Why Polarization?

To understand how group polarization solidifies and spreads rumors, we need to ask why like-minded people go to extremes. There are three important reasons.

1. *The exchange of information intensifies preexisting beliefs.* The most important reason involves information.[40] People tend to respond to the arguments made by other people -- and the pool of arguments, in any group with some predisposition in one direction, will inevitably be skewed in the direction of the original predisposition.

Suppose that you are in a group of people whose members tend to think that Israel is the real aggressor in the Mideast conflict, that eating beef is unhealthy, that some person did in fact engage in sexual misconduct, or that same-sex unions are a good idea. In such a group, you will hear many arguments to that effect, and considerable support for reports, including rumors, that support these tentative thoughts. Because of the initial distribution of views, you will hear relatively fewer opposing views. It is highly likely that you will have heard some, but not all, of the arguments that emerge from the discussion. After you have heard all of what is said, you will probably move further in the direction of being anti-Israel, opposed to eating beef, accepting the claim of sexual misconduct and favoring civil unions – and you will probably be more inclined to accept supporting rumors. And even if you do not move – even if you are impervious to what others think –- most group members will probably be affected.

2. *Corroboration breeds confidence, and confidence breeds extremism*. Those who lack confidence, and who are unsure what they should think, tend to moderate their views. [41] Suppose that you are asked your view on some question on which you lack information – say, whether some rumor is true. You are likely to avoid an extreme position. It is for this reason that cautious people, not knowing what to do, are likely to choose the midpoint between the extremes.[42] But if other people seem to share their views, people are likely to become more confident that they are correct. As a result, they will probably move in a more extreme direction.

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[40] See Roger Brown, Social Psychology: The Second Edition 200-45 (1985).
[41] See Robert Baron et al., Social Corroboration and Opinion Extremity, 32 J Experimental Soc. Psych. 537 (1996).
[42] See Mark Kelman et al., Context-Dependence in Legal Decision Making, 25 J. Legal Stud. 287, 287-88 (1996).

In a wide variety of experimental contexts, people's opinions have been shown to become more extreme simply because their initial views has been corroborated, and because they have been more confident after learning of the shared views of others.[43] Suppose that other people share your view that the United States is not to be trusted, that the attacks of 9/11 were staged, or that Iran poses a serious threat to the rest of the world. If so, your own view will be more deeply felt after you hear what they have to say.

What is especially noteworthy here is that this process – of increased confidence and increased extremism – is often occurring simultaneously for all participants. Suppose that a group of four people is inclined to distrust the intentions of the United States with respect to foreign aid. Seeing her tentative view confirmed by three others, each member is likely to feel vindicated, to hold her view more confidently, and to move in a more extreme direction. At the same time, the very same internal movements are also occurring in other people (from corroboration to more confidence, and from more confidence to more extremism). But those movements will not be highly visible to each participant. It will simply appear as if others "really" hold their views without hesitation. As a result, our little group might conclude, after a day's discussion, that the intentions of the United States, with respect to foreign aid, cannot be trusted at all.

We have a clue here about the immense importance of social networks, on the Internet and in ordinary life, in transmitting rumors and in creating movements of various sorts. Thus Allport and Postman emphasizing that a necessary condition for the circulation of rumors is that "[s]usceptible individuals must be in touch with one another."[44] Social networks can operate as polarization machines, because they help to confirm and thus amplify people's antecedent views.[45] Consider the fact that in one army camp, "the rumor that all men over thirty-five years of age were to be discharged traveled like lightning – but almost exclusively among men over that age."[46] A far more serious example is provided by Islamic terrorism, which is fueled by spontaneous social networks, in which like-minded people spread information and discuss grievances, with potentially violent results.[47] At certain stages, "the interactivity among a 'bunch

[43] Baron et al., supra note.
[44] Allport and Postman, supra note, at 182.
[45] See Tolga Koker and Carlos Yordan, Microfoundations of Terrorism: Exit, Sincere Voice, and Self-Subversion in Terrorist Networks (unpublished manuscript 2009).
[46] Allport and Postman, supra note, at 182.
[47] See Marc Sageman, Leaderless Jihad (Philadelphia: University of Pennsylvania Press, 2008).

of guys" acted as an echo chamber, which progressively radicalized them collectively to the point where they were ready to collectively join a terrorist organization. Now the same process is taking place online."[48] The major force here is not websites, which people read passively; it consists of listserves, blog, and discussion forums, "which are crucial in the process of radicalization."[49]

These are examples from the political domain, where rumors run rampant; but there are many other illustrations. Why are some foods enjoyed, or rumored to be especially healthy, in some places, whereas the same foods are disliked, or rumored to be unhealthy, in other places? "Many Germans believe that drinking water after eating cherries is deadly; they also believe that putting ice in soft drinks is unhealthy. The English, however, rather enjoy a cold drink of water after some cherries; and Americans love icy refreshments."[50] A less innocuous example: In some nations, strong majorities believe that Arab terrorists were not responsible for the attacks of September 11, 2001. According the Pew Research Institute, 93 percent of Americans believe that Arab terrorists destroyed the World Trade Center, whereas only 11 percent of Kuwaitis believe that Arab terrorists destroyed the World Trade Center.[51] With respect to daily life, a great deal of what we believe, like, and dislike is influenced by the processes of information exchange that I am exploring here.

3. *People's concern for their reputations can increase extremism.* A third explanation involves social comparison. That explanation begins with the claim that people want to be perceived favorably by other group members, and also to perceive themselves favorably. Sometimes our views are, to a greater or lesser extent, a function of how we want to present ourselves. Of course some people are more concerned with others with their self-presentation. But once we hear what others believe, some of us will adjust our positions at least slightly in the direction of the dominant position, to hold onto our preserved self-presentation. We might contain our opposition; we might voice somewhat more enthusiasm for the majority view than we really feel.

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[48] Id. at 116.
[49] Id.
[50] See Joseph Henrich et al., Group Report: What is the Role of Culture in Bounded Rationality?, in Bounded Rationality: The Adaptive Toolbox 353-54, (Gerd Gigerenzer & Reinhard Selten, eds., Cambridge: MIT Press, 2001), for an entertaining outline in connection with food choice decisions.
[51] Edward Glaeser, Psychology and Paternalism, 73 U Chi L Rev 133 (2006).

Some people might want to show, for example, that they are not cowardly or cautious, especially in an entrepreneurial group that disparages these characteristics and that favors boldness and risk-taking. In business, people often want to seem to be risk-takers. In such a group, people will frame their position so that they do not appear cowardly or cautious by comparison to other group members. And when they hear what other people think, they might find that they occupy a somewhat different position, in relation to the group, from what they hoped. They will shift accordingly.[52] This might be because they want others to see them in a certain way. Or it might be because they want to see themselves a certain way, and a shift is necessary so that they can see themselves in the most attractive light. The phenomenon occurs in many contexts, including acceptance and transmission of rumors.

IV. Biased Assimilation, Attitude Polarization, and False Rumors

The discussion thus far seems to offer a simple lesson: False rumors spread as a result of social interactions. To correct them, steps should be taken to expose people to balanced information and to make corrections. But there is a serious problem here. The very processes that create the false beliefs may make them impervious to correction. Let us see why.

A. Attitude Polarization

People assimilate information in a biased fashion.[53] For that reason, false beliefs can be extremely difficult to correct. Sometimes exposure to balanced information actually producesgreater polarization.[54] And ironically, correction of false perceptions can actually

[52] Id. It has similarly been suggested that majorities are especially potent because people do not want to incur the wrath, or lose the favor, of large numbers of people, and that when minorities have influence, it is because they produce genuine attitudinal change. See Baron et al., supra note, at 82. The demonstrated fact that minorities influence privately held views, on such contested issues as gay rights and abortion, see id. at 80, attests to the value of creating institutions that allow room for diverse voices.

[53] In the context of rumors, this point is illuminatingly explored in the classic treatment in Allport and Postman, supra note, at 105-115.

[54] See, e.g., Lee Ross et al., Perseverance in self-perception and social perception: Biased attributional processes in the debriefing paradigm, 32 Journal of Personality and Scoial Psychology 880 (1975); Dan Kahan et al., Biased Assimilation, Polarization, and Cultural Credibility: An Experimental Study of Nanotechnology Risk Perceptions (unpublished manuscript 2008).

increase people's commitments to those perceptions.[55] Such corrections can therefore be self-defeating.

The initial work on biased assimilation involved capital punishment.[56] People were given discussions of the deterrent effects of the death penalty. They read studies arguing both in favor of and against deterrence; they also read studies offering data, critiques, and rebuttals. A key finding was that both supporters and opponents of the death penalty were more convinced by the studies supporting their own beliefs; they rated those studies as more persuasive and more probative. And having read the opposing studies, both sides reported that their beliefs had shifted toward a more extreme commitment to what they thought before they began to read. As a result, exposure to competing views produced an increase in polarization.

There were strong correlations between the magnitude of changes in people's attitudes and the differences in their ratings of how convincing, and how well done, the studies were.[57] True, both proponents and opponents were affected, at least for a brief time, by evidence that contradicted their views. But they reverted to their original positions, or became more extreme only after reading the details, the critiques, and the rebuttals. Hence a "rebound effect" was crucial to the increase in polarization. No such effect was observed when people read details and critiques of materials supporting their original positions. The conclusion is that when proponents and opponents of the penalty are exposed to the same evidence, the distance between their views actually increases. Many studies show biased assimilation of this kind.[58]

For rumors, the lesson is straightforward. Suppose that a group of people is committed to a false rumor. Suppose that group members encounter material that both supports and contradicts the rumor. If so, they might well end up all the more strongly committed to their antecedent belief. On the Internet, a process of this kind seems to be occurring every day, as those who believe rumors end up believing them all the more strongly after hearing a balanced discussion of whether they are true. Of course it is also true that balanced information sometimes helps; I will return shortly to the question why and when this is so.

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[55] See Brendan Nyhan and Jason Reifler, When Corrections Fail: The Persistence of Political Misperceptions (unpublished manuscript 2008).
[56] See Ross et al., supra note.
[57] Id at 2104.
[58] See Charles Taber et al., The Motivated Processing of Political Arguments (unpublished manuscript 2008).

B. Self-Defeating Corrections

Sometimes corrections of false impressions end up strengthening those very impressions.[59] Suppose that there is a widespread social misperception about some person X, that Group A accepts the misperception, but that Group B is skeptical of it. Now suppose that the misperception is corrected by some salient source of news. Members of Group B will take the correction as such and view the world more accurately. Members of Group A, by contrast, may not be moved at all. Indeed, they might become even more convinced that their original position was right.

In a relevant experiment, people were exposed to a mock news article in which President Bush defended the Iraq war, in part by suggesting (as President Bush in fact did) that there "was a risk, a real risk, that Saddam Hussein would pass weapons or materials or information to terrorist networks."[60] After reading this article, they read about the Duelfer Report, which documented the lack of weapons of mass destruction in Iraq. Subjects were then asked to state their agreement, on a five-point scale (from "strongly agree" to "strongly disagree") with the statement that Iraq "had an active weapons of mass destruction program, the ability to produce these weapons, and large stockpiles of WMD."[61]

The effect of the correction greatly varied by ideology. For very liberal subjects, there was a shift in favor of disagreement with this statement; the shift was not significant, because very liberal subjects already tended to disagree with it. But for those who characterized themselves as conservative, there was a statistically significant shift in the direction of *agreeing* with the statement. "In other words, the correction backfired – conservatives who received a correction telling them that Iraq did not have WMD were more likely to believe that Iraq had WMD than those in the control condition."[62] It follows that the correction had a polarizing effect; it divided people more sharply, on the issue at hand, than they had been divided before.

A subsequent study, conducted a later time, yielded a different conclusion. Conservatives in general accepted the correction, perhaps because the Bush administration had itself ceased to emphasize the existence of WMD in Iraq.[63] But among those conservatives who rated Iraq as the

[59] See Brendan Nyhan and Jason Reifler, When Corrections Fail: The Persistence of Political Misperceptions (unpublished manuscript 2008).
[60] Id. at 12.
[61] Id. at 13.
[62] Id. at 14.
[63] Id. at 18.

most important issue facing the nation, the correction did indeed fail. An independent study confirmed the more general effect. People were asked to evaluate the proposition that cutting taxes is so effective in stimulating economic growth that it actually increases government revenue. They were then asked to read a correction from either the New York Times or FoxNews.com. The correction actually increased people's commitments to the proposition in question. "Conservatives presented with evidence that tax cuts do not increase government revenues ended up believing this claim more fervently than those who did not receive a correction."[64]

Liberals are hardly immune to this effect. Many liberals believe, wrongly, that President Bush imposed a ban on stem cell research. Presented with a correction from the New York Times or FoxNews.com, liberals continued to believe what they did before. By contrast, conservatives accepted the correction. Hence the correction produced an increase in polarization.[65] Interestingly, it mattered, in terms of the basic effect, whether the correction came from the New York Times or Fox News: Conservatives distrusted the former more, and liberals distrusted the latter more. Indeed, source credibility often matters a great deal.[66]

The upshot for rumors is simple; indeed, the experiments involved rumors of a certain sort. If people believe that some official engaged in certain misconduct, or that a person in the public domain acted improperly, efforts at correction may not help; they might even hurt. Once a cascade has spread false information, or group polarization has entrenched a false belief, those who tell the truth may end up producing a greater belief to the belief in question. The combination of biased assimilation, self-defeating corrections, and social influences can be extremely damaging to the marketplace of ideas. Often it will ensure that people converge on falsehoods – and that their beliefs are quite robust.

C. Explanations

How can these findings be explained[67]? And what is the domain of biased assimilation and attitude polarization?

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[64] Id. at 21.
[65] Id. at 23.
[66] Carl I. Hovland & Walter Weiss, The Influence of Source Credibility on Communication Effectiveness, 15 Public Opin Quart 635-50 (1951-52).
[67] This question is addressed in more detail in Edward Glaeser and Cass R. Sunsten, The Polarizing Effect of Information (unpublished draft 2008).

1. *Motivated assimilations*. The simplest point is that people appear to process information in a way that is distorted by their emotions and their motivations. Consider the well-established finding that after purchasing a product, people tend to seek out information tending to show that their purchase was a sensible one. The most obvious explanation is that people are seeking to be reassured that they made the right decision. Perhaps biased assimilation is a product of a desire to reduce cognitive dissonance,[68] which makes people credit and seek out congruent information, and discredit and avoid incongruent information. For false rumors, it should be easy to see how such a desire might be at work. More generally, people process information in a way that fits with their desires, and biased assimilation is a product of that fact.

When people display biased assimilation, motivational factors are usually at work. "Disconfirmation bias" suggests that people work especially hard to disconfirm arguments that contradict their prior commitments. If people are motivated to credit arguments that fit with what they already think, and to discredit arguments that point the other way, the relevant findings should be unsurprising. This is unquestionably a part of the story, but another, more strictly cognitive explanation is also consistent with the data, and it too has considerable explanatory power.

2. *Priors and biases.* Suppose that society consists of two groups of people, the Sensibles and the Haters, and that members of both groups have strong prior convictions. Suppose that the Sensibles have a strong antecedent commitment to a certain view – say, that the Holocaust actually happened, that Al Qaeda was responsible for the attacks of 9/11, that the president is not a communist spy. Suppose that the Sensibles read balanced materials on these three questions.

The materials that support their antecedent view will not only seem convincing; they will also offer a range of details that, for most Sensibles, will fortify what they thought before. By contrast, the materials that contradict their antecedent views will seem implausible, incoherent, ill-motivated, possibly a bit mad. The result is that people's antecedent convictions will be strengthened. Of course the opposite pattern will be observed for the Haters, who begin with the belief that the Holocaust did not happen, that the United States was itself responsible for the attacks on 9/11, that the president is not a communist spy. Biased assimilation can therefore be predicted from the mere existence of strong antecedent convictions and the effects of those convictions on (rational) judgments about new information.

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[68] See Leon Festinger, A Theory of Cognitive Dissonance (1959).

3. *When biased assimilation -- and when not.* This simple account helps to explain why biased assimilation will occur little, or perhaps not at all, if groups begin with a weak prior commitment or with symmetrical trust. Suppose that the Sensibles are weakly committed to the propositions above and that the Haters disagree with them, but without much conviction. If both groups are exposed to balanced materials, they might tend to coalesce -- at least if they do not have significantly asymmetrical trust.

Biased assimilation should be easy to understand in this light. It is in large part a product of strong prior convictions and also of divergences in trust. The Sensibles will trust some people and distrust others, and the Haters will show the opposite pattern. When they read materials from both sides, it is not exactly stunning that they end up learning from, and discounting, different sides. If, by contrast, people begin with weak prior convictions and do not suffer from asymmetrical trust, they will converge. We can also see in this light why people are often moved from their prior convictions, not by their usual antagonists and opponents, but by people with whom they typically identify.[69]

4. *Self-defeating corrections*. Turn now to the case of correction. Suppose that people believe that the Holocaust did not happen and that Al Qaeda was not responsible for the attacks of 9/11. After reading materials that purport to be corrections, many people will be unlikely to change their views. On the contrary, the purported correction may be, in a sense, self-defeating. Perhaps the correction serves mostly to anger people; if so, it might strengthen their commitment to what they believed before. Perhaps the correction focuses people's attention on the issue and the debate in question, and in that sense leads them to commit themselves, more strongly than before, to what they vaguely believed. It is well-established that when people are given information suggesting that they have no reason to fear what previously seemed to be a small risk, their fear often increases.[70] This mysterious finding might be explained by the fact the information focuses people's attention on that risk, and when attention is focused on a risk, fear increases. So too, perhaps, with corrections of false reports: By focusing people's attention on those reports, they increase the sense that wrongdoing has occurred.

On purely cognitive grounds, it does seem harder to explain situations in which corrections actually strengthen (false) beliefs. But on certain assumptions, the very existence of

[69] See Kahan et al., Biased Assimilation, supra note.
[70] See Cass R. Sunstein, Laws of Fear (2006).

the correction may attest to its falsehood. An attempted refutation by an untrustworthy source can be taken as additional evidence in favor of those beliefs. For example, the attempt might not have been made if the beliefs were not true.[71] Why correct an error, unless there is not something to it?

We can identify in this light the circumstances in which corrections will not be self-defeating. If people do not have strong motivations for accepting a falsehood, if their prior knowledge is weak, and if they have a degree of trust in those who are providing the correction, then false beliefs will dissipate. This point suggests heterogeneous outcomes among different social groups. Some groups will be strongly motivated, for example, to accept a terrible rumor about a politician or an institution, whereas other groups will be strongly motivated to reject it.

5. *Transient and persistent rumors.* The implications for rumors in particular are simple. Some rumors will not persist; people are not motivated to hold them, they lack strong prior convictions, and corrections work. In the 2008 election, there were many vicious rumors about Barack Obama; these rumors faded, or had little impact, apparently because of the lack of strong prior convictions and sufficient trust in those who corrected them. It might be thought that in the era of the Internet, people will increasingly discount rumors, if only because they know that falsehoods are omnipresent. Where people lack strong prior convictions, and are simply attempting to learn the truth, they might be expected to think that in a world pervaded by false rumors, much of what is said cannot be believed.

Other rumors are tenacious. People are strongly motivated to hold them, their antecedents convictions are firm, and corrections are futile. Different rumors will fall in different categories among different groups In some communities, a rumor that white doctors spread AIDS, or that the United States was responsible for the attacks of 9/11, may have real traction and be difficult to dislodge; in other communities, such rumors may have little traction and be easily corrected. Similar things might be said about rumors about individuals in the private and public spheres.

VI. Rumors, Priors, and Culture

I have referred, at various points, to an important question: Why do some false rumors have traction in some places, while having so little in others? Let me bring some of the strands of the discussion together.

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[71] See Sunstein and Vermeule, supra note.

To answer that question, it is necessary to say something not only about information transmission, but also about cultural anxieties, fears, hopes, and needs; and these vary across populations.[72] In one group, a rumor about the nefarious activities of a national leader would fit well with prior convictions, and people would also be motivated to accept it. In the 1990s, those who despised President Clinton were far more likely to accept rumors about his private and public misconduct than were those who were neutral toward him or favorably disposed. Because of their motivations, some people will be sharply inclined to credit rumors that other people will be sharply inclined to resist. Allport and Postman conclude that "even under laboratory conditions we find assimilation in terms of deep-lying emotional needs. The rumor tends to fit into, and support, the occupational interests, class or racial memberships, or personal prejudices of the reporter."[73]

Prior convictions will dispose people to accept, on cognitive grounds, claims that might be rejected by those lacking such convictions. As we have seen, asymmetrical trust is exceedingly important here. Some information sources will have authority in some communities that they lack in others; recall the finding that Fox News has more authority than the New York Times within some groups, and less within others.[74]

It has become standard to distinguish between "dread rumors" and "wish rumors," which have different relationships to the prior convictions of those who spread and accept them.[75] The key point is that one group's dread rumor may be another's wish rumor. And of course propagators who invent rumors, or spread them at any early stage, may well be entirely aware of how relevant populations will react. Their acts of invention or spreading are likely to be a product of their understanding of public reactions.

We can understand, in this light, the different fate of different rumors within different groups. Consider rumors about whether Barack Obama is a Muslim, about whether AIDS was

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[72] See G.W. Allport and L.J. Postman, The Psychology of Rumor (1947); Adrian Bangerter and Chip Heath, The Mozart Effect: Tracking the Evolution of A Scientific Legend, 43 British J Social Psych 605 (2004). A vivid example involves the racial fears of whites, which were evident in many rumors about slave rebellions. See Knopf, supra note, at 17-18. A related example involves the anxieties of citizens of England during World War I, in which rumors were rife that Russian troops had landed. Robert H. Knapp, A Psychology of Rumor, 8 Public Opinion Quarterly 31 (1944). Allport and Portman suggest: "Rumor is set in motion and continues to travel in a homogeneous social medium by virtue of the strong interests of the individuals involved in the transmission. The powerful influence of these interests requires the rumor to serve largely as a rationalizing agent: explaining, justifying, and providing meaning for the emotional interest at work." Allport and Portman, supra, at 43.

[73] Id. at 115.

[74] See Nylan and Reifler, supra note.

[75] See Bordia and DeFonzo, supra note.

invented by white doctors, about whether Bill Clinton killed his adviser Vince Foster, about whether the attacks of 9/11 were ordered by Israel or the United States. Multiple equilibria, of the sort found in the music download study, can be produced by informational cascades with different early movers. But they can also be produced by sharp differences in initial convictions, which ensure that some rumors will spread widely while equally credible ones will die. Return to a point with which I began: People will have different thresholds for accepting different rumors, and the existence of diverse thresholds helps explain why some false rumors gain traction.

We can also understand, in this light, the circumstances that make people, groups, and nations likely to accept false rumors. When antecedent motivations or knowledge lead people to be especially credulous about a particular allegation, falsehoods may spread rapidly. It has been suggested that rumors do well "in situation characterized by social unrest. Those who undergo strain over a long period of time – victims of sustained bombings, survivors of a long epidemic, a conquered populace coping with an army of occupation, civilians grown weary of a long war, prisoners in a concentration camp, residents of neighborhoods marked by interethnic tension – become restless and dissatisfied."[76] These are situations in which people are likely motivated to accept false rumors -- and in which prior knowledge provides little insulation against their acceptance. We should also be able to see that in a heterogeneous society, some groups may suffer from strain, or relative strain, while other groups may not. Hence the conditions will be right for rumor acceptance by the former groups but not the latter.[77]

VII. The Chilling Effect Revisited

In discussions of possible restrictions on free speech, it is standard to speak of, and to deplore, the "chilling effect" that is created by the prospect of civil or criminal sanctions.[78] Libel law, for example, might chill speech about public figures and public issues, in a way that could damage democratic debate. And if there is a "marketplace of ideas," we should be especially concerned about the risk of chilling effect, because it will undermine processes that will ultimately produce the truth.

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[76] Tamotsu Shibutani, Improvised News: A Sociological Study of Rumor 46 (1966).
[77] Knopf, supra note, offers many examples.
[78] For a catalogue, see http://www.chillingeffects.org/

A. Optimism, Realism, and Optimal Chill

Everyone should agree that a chilling effect can be exceedingly harm to a system of free expression, and that it is important to devise methods to reduce that effect. But the discussion thus far raises doubts about these standard claims, which seem, in their most extreme forms, to be based on empirical blunders and an indefensible optimism about the actual operation of information markets.

There are two points here. *First*, the chilling effect may be desirable insofar as it reduces damaging and destructive falsehoods, including falsehoods about individual, famous or not famous, and institutions, public or private. To be sure, some falsehoods are helpful for producing the truth. But many false rumors are not merely damaging but also entirely unhelpful to those who seek to know what is true. *Second*, the marketplace of ideas will not work well if social influences and biased assimilation ensure that false rumors can spread and become entrenched. As we have seen, one consequence of cascade effects and group polarization is to make false rumors widely believed in relevant communities. Under certain conditions, it can be exceedingly difficult to dislodge those false rumors.

Claims about the risks associated with the chilling effect should note that any society needs not an absence of "chill," but an optimal level. To decide on the optimal level, it is necessary to have an understanding of the relationship between the marketplace of ideas and the emergence of truth. Such an understanding would require a great deal of empirical work, which I have not attempted to undertake here. But I hope that I have said enough to suggest that especially in the age of the Internet, the marketplace of ideas will often ensure widespread acceptance of falsehoods.

There are many empirical puzzles here. Two of the most important are these: To what extent do people believe false rumors on the Internet? To what extent are such rumors subject to correction? On a pessimistic view, many or most people follow a simple heuristic, to the effect that people generally do not say things unless they are true. If it is reported that some student or professor engaged in terrible misconduct, or that a candidate for public office is corrupt, many people may be likely to think that the report would not have been unless it had some basis. On this view, there is fire wherever there is smoke. And even if people do not think exactly that, the presence of the bad rumor can leave a residue of suspicious, a kind of negative affect, that can ultimately affect beliefs and behavior.

On an optimistic view, there are two safeguards against widespread belief in false rumors, especially in the era of the Internet. The first is the sheer existence of numerous rumors, many of them false. With so much falsity, it might be thought, people will increasingly discount and distrust what they read and hear. Internet "scams" were more effective ten years ago than today; when you read that you have won the lottery, you are unlikely to believe it, even if you might have thought "maybe!" a decade before. Perhaps the culture will generally move toward greater skepticism, especially when the Internet ensures that propagators can easily reach a large audience.

The second safeguard is the greater ability to produce instant corrections. A political figure is able to say, immediately, that the false rumor is false, and to reach numerous people in doing so. Even a private person, lacking any kind of celebrity, may be able to do the same thing. Taken together, the two safeguards might provide a strong correction against belief in false rumors. In my view, this judgment is too optimistic, but it bears empirical testing.

B. Lives, Pieces of Lives, and the Truman Show (for Everyone)

For democratic discussion about actual and prospective public officials, existing evidence suggests that there is a genuine problem. The Internet is full of reports about what people (supposedly) did and said, and about what they (supposedly) believe. Sometimes those reports are false and based on nothing at all, other than a desire to obtain attention or to promote or to defeat a cause. Sometimes those reports are false but based on a shred or a kernal or truth, but they produce a palpably incorrect impression, one that harms not only individual people but also institutions that might benefit from their participation.

There is a larger point in the background. People's lives consist of a number of statements and actions, and over a period of years, it is nearly inevitable that a particular person will have said something, or done something, that might trigger concern or perhaps even opprobrium if it is broadcast to the world. One of the great risks of the era of bloggers and YouTube is that statements and actions are so closely monitored that any particular one, taken out of context, might seem representative of the whole, or a clue to something dark and bad.

To see the concern, imagine a world, not so very different from what seems to be emerging in our own, in which many lives are monitored and filmed, not by government, but by technologies that permit them to be recorded. (This is a generalization of the 1998 movie, *The*

Truman Show.) Of course recording would present serious risks to individual privacy.[79] But this is not my concern here; we could suppose that in this imaginable world, recording occurs only for events or statements that are some sense public. The problem, in any variation on such a world, is that single incidents can obtain real salience. And if this is so, the processes that I have described can greatly magnify that salience. For public figures and members of public institutions, this is a serious problem. It is also a problem for self-government insofar as citizens obtain a false understanding of those people. Of course my topic is false rumors, not true but misleading ones. It is difficult to "chill" reports on particular events that provide a deceptive understanding; the law itself cannot and should not become involved here. But at least we can say that in terms of social norms, there is an optimal level of chill on deception as well; and that it is exceedingly important to attempt to convey a social understanding that particular events and statements may badly mislead, even or especially when they become salient.

There is also a problem for ordinary people, who can be greatly injured by false rumors, and all the more easily by virtue of the Internet. Friends, employers, and even family members might well encounter those rumors, based perhaps on a misreading of a single statement or incident. That statement may well come to be taken as representative of some whole, of only because of the operation of human attention; recall the importance of focusing. A chilling effect, at least via social norms, can achieve a great deal of good. The more tractable issue, for purposes of both analysis and policy, involves falsehoods. As we have seen, they can be persistent, not in spite of the marketplace of ideas but because of it.

Of course nothing said here is sufficient to justify any reform of existing practices, even with respect to false rumors. As I have said, that any chilling effect on falsehoods is likely to affect truths as well. What counts as a false rumor or true one is often greatly disputed, and we might not trust our institutions to tell the difference with sufficient reliability. Perhaps our norms and our practices will ensure that we discount, to an increasing extent, what we hear. But at the very least, we should be able to see that in the age of the Internet, there is no reason for easy confidence in power of the marketplace of ideas to produce truths, especially when we consider the all-too-comfortable relationship, much of the time, between prior convictions and acceptance of false statements.

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[79] See Daniel Solove, The Future Of Reputation: Gossip, Rumor, and Privacy on the Internet (2008).

VIII. Conclusion

False rumors are pervasive on the Internet, and otherwise sensible people believe them. Self-interested and altruistic propagators spread rumors about prominent people and institutions. Such rumors cast doubt on their subject's honesty, decency, fairness, patriotism, and sometimes even sanity; often they portray public figures as fundamentally corrupt. Those who are not in the public sphere are similarly vulnerable. In a matter of seconds, it is easy to portray almost anyone as some kind of wrongdoer, and in that sense to injure their reputation, if only because of the easy availability of information on the Internet. The Internet, then, has two important effects. It allows information to be provided to the world, in an instant, and it allows easy discovery, by anyone, of that information, also in an instant.

The success or failure of rumors depends in large part of people's antecedent convictions. Some people are predisposed to accept certain damaging statements about public officials or important institutions. They are strongly motivated to accept those statements, which may provide a kind of emotional relief, or which may support their initial inclinations and in that sense reduce dissonance or otherwise fit with their desires. Other people, favorably disposed toward those people and institutions, are predisposed to reject the same statements simply because they produce discomfort or dissonance.

This point about motivations is complemented by one about information. When people begin with an initial view, it is usually because of what they know. If a rumor fits well with what they already believe, they have some reason to conclude that it is true. If the rumor is wildly inconsistent with their existing knowledge, they have some reason not to credit it. Different people and groups will have different thresholds for accepting beliefs that fit poorly with their existing motivations and knowledge. As a result, we can find stable commitments to certain beliefs within some groups amidst stable commitments to sharply opposing beliefs in other groups.

Rumor transmission frequently occurs as a result of cascade effects and group polarization. Indeed, rumors spread as a textbook example of an informational cascade: Imperfectly or entirely uninformed people accept what they hear from others. Sometimes reputational cascades are involved as well, as people appear to accept rumors, not because they actually believe them, but so as to curry favor or not to face opprobrium. Group polarization also plays a large role, as people strengthen their antecedent commitment to a rumor simply because

of a process of internal deliberation. When employers come to believe something about an employee, or teachers about a student, or students about a teacher, or voters about a public official, group polarization is typically at work.

It is tempting, in this light, to think that balanced information and unambiguous corrections can counteract false rumors. Existing evidence suggests that this plausible thought should be taken with many grains of salt. If people are strongly committed to a rumor, and if they distrust those who deny it, they might not be much moved by the denial. The phenomenon of biased assimilation suggests that a reasonable debate can strengthen an unreasonable position and increase polarization. Even more strikingly, corrections can turn out to be self-defeating in the sense that they strengthen people's commitment to their misperception. Here as well, strong prior convictions and asymmetrical trust are crucial. We do not yet have good evidence that the power of rebuttal, and increasing skepticism about rumors, will operate as a safeguard against acceptance of false rumors.

I have said little here about how to respond to the existing situation, either through social norms or through legal institutions. The risk of a chilling effect must be taken seriously. But it should be plain that the marketplace of ideas will often fail to produce truth; the very mechanisms explored here ensure that any marketplace will lead many people to accept damaging and destructive falsehoods. A clear conclusion is that some kind of chilling effect on false statements of fact is important – not only to protect people against negligence, cruelty, and unjustified damage to their reputations, but also to ensure the proper functioning of democracy itself.